



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Environmental Restoration Division

February 3, 1994

Reply to
Attn of: HW-124

Ms. Lisa Green, Manager
Environmental Restoration Division
U.S. Department of Energy
Idaho Operations Office
785 DOE Place
Idaho Falls, Idaho 83401-1562

Re: The Draft Sampling and Analysis Plan (SAP) for Operable Unit
(OU) 4-06, CFA-06 Lead Shop and CFA-43 Lead Storage Area

Dear Ms. Green:

We have reviewed the referenced document and have several comments, which are enclosed.

This SAP generally follows the approach agreed upon by the three agencies during the development of the Scope of Work for the investigation of this OU, but several refinements will be required to support the use of more field screening processes, such as X-ray refraction to focus selection of samples for laboratory analyses. We are concerned that a revised version of the cross-WAG, standardized Quality Assurance Project Plan was used in this SAP without having been reviewed by the agencies.

If you or your staff have questions about any of the attached comments, please contact me at (206) 553-1172.

Sincerely,

Howard R. Blood
Howard R. Blood
WAG 5 Project Manager

Enclosure

cc: Alan Dudziak, DOE-ID
David Frederick, IDHW-IF
Shawn Rosenberger, IDHW-IF
Dean Nygard, IDHW

cc w/o encl: Jerry Lyle, DOE-ID
Carol Strong, RUST Geotech

REVIEW COMMENTS
DRAFT PRELIMINARY SCOPING TRACK 2 SAMPLING
AND ANALYSIS PLAN FOR OPERABLE UNIT 4-06
CFA-06 LEAD SHOP AND CFA-43 LEAD STORAGE AREA
IDAHO NATIONAL ENGINEERING LABORATORY, IDAHO

GENERAL COMMENTS

1. The general approach presented for sampling and analysis is appropriate. However, as discussed in the specific comments, additional explanation or justification should be provided for the following topics:

- Sampling grid size
- "Action level" of 90 ppm for lead
- Limiting the contaminants of concern to lead, antimony, arsenic, nickel, and cadmium
- Need for contract laboratory program (CLP) analytical methods in addition to SW-846 method 6010.

2. A few biased sampling locations for each site could be specified in the SAP to increase the likelihood of obtaining data from the most contaminated locations. Specific biased sampling locations could be specified in the SAP based on historical data and previous observations.

3. The risk assessment approach that will be used in the Summary Report should be discussed sufficiently to clarify how the data collected as a result of this SAP will be used. It may be appropriate to use the most contaminated location for a screening risk assessment. If the risk at the most contaminated location is below risk based criteria, no further risk analysis would be necessary. However, if the risk at the most contaminated location is found to exceed risk-based criteria, a baseline risk assessment approach based on EPA guidance (1989), assessing the risk posed by the site as a whole could then be implemented.

4. Recommend incorporating the September 1993 DQO Guidance where possible, as it simplifies and clarifies the Superfund DQO process.

SPECIFIC COMMENTS

1. Page iii: Use of the term "primary documents" should be avoided because of the specific definition it has within the FFA/CO.

2. Section 1, page 1: In the initial discussion of CERCLA, SARA (1986) should also be mentioned.

In the third bullet it should be made clear that the referenced "Track 1" is a PSP, consistent with the Track 2 Guidance.

3. Section 1, page 2: Recommend "highlighting" CFA on the map.

4. Section 1, page 3: Recommend stippling the CFA-06 location, as was done for CFA-43.

5. Section 1, page 5, second paragraph: The statement that a SAP "...ensures that all environmental data generated for the project are scientifically valid and legally defensible" is excessive. As a minimum, insert the qualifier that the SAP is "intended to ensure that all environmental data is.... defensible."

6. Section 2, page 5: In the first paragraph, the risk assessments will determine if the "...site-specific exposure scenarios result in risks that are at or below the acceptable risk ranges established by the NCP". It is unclear what is meant by the discussion of the "level of acceptable risk for the OU".

In the second paragraph, it is stated that the "action level" for lead is 90 ppm and explains that this concentration is three times the background concentration. The term "action level" needs to be explained, since this is usually a term used when making cleanup determinations. Explain how the decision to set the "action level" at three times background was reached, along with a reference for the background concentration.

In the second paragraph of 2.1.1, clarify that the "removal" that is mentioned was not a "CERCLA removal action", and provide a specific cite for the RCRA TCLP maximum concentration for lead.

In the first paragraph of 2.1.2, identify the source of the information, i.e., records, anecdotal reports, etc.

7. Section 2.1, page 6: Need to provide a wind rose to support the discussion of prevailing winds.

The text identifies arsenic and antimony as contaminants associated with lead at site CFA-06, and also states that there is circumstantial evidence that metals other than lead, such as antimony, arsenic, nickel, and cadmium, are potential contaminants. Antimony and arsenic are commonly used in lead alloys. However, justification for concern about nickel and cadmium should be provided, as well as justification for excluding copper, a CLP target analyte that is also common in lead alloys.

Need to complete the first sentence in 2.1.4.3, with "leading to ingestion".

8. Table 1, page 9: The rationale for using SW-846 method 6010 results for calibrating the x-ray fluorescence (XRF) results and then using CLP methods for further evaluating the hot spots should be explained.

Add a note citing the reference for the data validation level designations, A, B, and C.

9. Section 2.2.3.2, page 10, second bullet: Clarify that the level of contamination at 1 meter below ground surface (bgs) at each hot spot is to be determined in order to evaluate whether there has been vertical migration of contamination from the surface.

10. Section 2.2.4, page 10, second paragraph: It is unclear how "This mistake could be mitigated by removing the contaminants before significant exposure has occurred" is valid when there is no indication of how/when such a "mistake" might be discovered. (e.g. The case where the mistake is not discovered until after significant exposure has already occurred)

11. Table 2, page 11: This table specifies the numbers of samples to be analyzed, and should include the samples collected to analyze the variation in concentrations between sample points, as described in Section 2.3.2.

Note "c" should be deleted. The rinsate sample should be sent for analysis along with the other samples.

12. Section 2.3, page 12: The first bullet at the top of the page should be expanded to clarify that the reason for identifying hot spots is to ensure that samples taken at depth to assess the extent of vertical migration are beneath a significant source.

The standard operating procedures for soil sampling (ER-SOP-11.12) and for field analysis of metals using a portable XRF instrument (ER-SOP-11.27), referenced in the fourth paragraph, should be provided to the EPA for review.

As discussed in comment 6 (above), the reasons for selecting the 90-ppm "action level" for lead, as identified in the last paragraph, should be presented.

The last paragraph should also state that the WAG managers will be consulted if the sampling indicates increasing lead concentrations with increasing sample depths beyond 1 meter.

13. Section 2.3, page 13: Explain the purpose of the two additional CLP samples at each site. Specific criteria must be established in this SAP for each decision (such as determining which of these samples are sent for analysis) that is left to the FTL.

It is unclear whether there will be any QC samples collected for the SSCSSs. This needs to be addressed; a determination that QC samples are not needed must be explained.

14. Section 2.3.2, page 13: The rationale for selecting the specified locations for an analysis of data variation between sample points should be provided.

Need to clearly state the number of samples that will be collected along each of the grid lines where samples for determining the variation in concentration of contaminants between grid locations are to be collected.

15. Section 2.3, page 15: In 2.3.3.1, the rationale for the selected grid spacing should be provided.

In 2.3.3.2, the discussion of soil sampling at locations selected on the basis of the prevailing wind directions should include reference to a wind rose diagram to justify the selected sampling locations. (This issue was also noted in comment 7, above)

Expand the text to explain what analyses will be performed on the transect line samples and how it was decided that none will be submitted for CLP analyses. Also explain what is meant by the statement that "The transect results will be treated separately from the systematic grid results", and the rationale for this decision.

In Section 2.3.4, the rationale for the selected grid spacing should be provided.

Also note when that sample locations that are moved, the logbook should include the reason for the change in location.

16. Section 2.3.6, page 17, fifth bullet: Since the purpose of the equipment rinsate blank is to verify that the decontamination has been performed effectively, the analysis of the equipment rinsate blank should be specified as part of the overall sampling and analysis plan.

17. Section 2.4.3, page 18: The equipment decontamination procedures should specify an initial scrubbing using a brush and nonphosphate detergent.
18. Section 2.5.4, page 19: It is unclear why custody seals are only specified for the CLP samples, since this practice should be applied for all samples being sent for analysis.
19. Section 2.5.5, page 20: Need to identify where the SW-846 analytical results will be recorded. (For the SSCSs)
19. Section 2.7, page 21: A definition for level B data validation or a reference for it should be provided, as also noted in comment #8, above.
20. Figure 6, page 23: The abbreviation "JSS" is not defined.
21. Appendix A: As a minimum, the Deliverables and Schedule section should be updated to reflect what is currently planned.
22. Appendix D, Sampling and Analysis Plan Tables: The following discrepancies should be resolved:
- In Section 2.3.2, the subplot grid locations specified for site CFA-43 sampling are C-3, C-8, and F-8. However, the sample designations specified in the tables appear to refer to grid locations C-3, B-8, and F-6.
 - Also, Section 2.3.2 indicates that one transect location for subplot sampling will be specified by the field team leader. These samples should be identified in these tables.
 - A sample for XRF analysis should be specified for grid location B-6 at site CFA-06.
 - For area CFA-06, 16 samples begin with the designation LOC 2-SUB- followed by two additional characters. It is not clear which samples these designations refer to.
 - It appears that the 20 samples specified in Table 2 for site-specific calibration standards for site CFA-43 are not included in these tables.

- It appears that the 20 samples for CFA-06 site-specific calibration standards are designated CONC. 1 through CONC. 20. Two CLP samples and two XRF samples are specified for each designation. However, the text in Section 2.3.1. only specifies SW-846 method 6010 analysis for each of the 20 locations selected.
- As discussed in the comment on Section 2.3.6, page 17, fifth bullet, analysis of equipment rinsate blanks should be specified.

23. Appendix E, Quality Assurance Project Plan: This plan has been revised (Rev 2), and is now being utilized without prior EPA review. Reduction in routine QC sampling is supported, however practices proposed such as not routinely analyzing equipment rinsate samples are not. This "standardized QAPjP" must be revised in a coordinated effort between IDHW, DOE-ID, and EPA before it is submitted as a part of another SAP on the WAG.

REFERENCES

DOE 1993. Track 2 Sites: Guidance for Assessing Low Probability Hazard Sites at the INEL. Draft. DOE/ID-10389. Revision 5. August.

EPA 1993. Data Quality Objectives for Superfund. Interim Final Guidance. EPA540-R-93-071. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, September.

EPA 1989. Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A). Interim Final. EPA/540/1-89-002. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Washington, D.C. December.